

EXPRESS MAIL
CERTIFICATE OF MAILING



Patent Application for:

Applicants: Federico Capasso
Alfred Yi Cho
Raffaele Colombelli
Claire F. Gmachl

Albert Lee Hutchinson
Arthur Mike Sargent
Deborah Lee Sivco
Alessandro Tredicucci

Atty. No: 65-104-1-19-28-7-34-13

Title: Technique for Measuring Intersubband
Electroluminescence in a Quantum Cascade
Laser

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Type or Print name of person signing this certificate: Wendy W. Koba, Esq.

Signature: Wendy W. Koba

IN THE UNITED STATES
PATENT AND TRADEMARK OFFICE

PATENT APPLICATION

CASE Capasso 65-104-1-19-28-7-34-13

TITLE Technique for Measuring Intersubband
Electroluminescence in a Quantum Cascade Laser

THE COMMISSIONER OF PATENTS AND TRADEMARKS
WASHINGTON, D.C. 20231

SIR

Enclosed are the following papers related to the above-name application for patent:

Specification

5 Informal sheet (s) of drawings

1 Assignment-To be recorded

Declaration and Power of Attorney

Associate Power of Attorney

Recordation Form Cover Sheet (2 copies)

CLAIMS AS FILED					
	No. Filed		No. Extra	Rate	Calculations
Total Claims	11	-20=	0	x \$18	0
Independent Claims	2	-3=	0	x \$80	0
Multiple Dependent, if applicable				x \$270	
BASIC FEE					\$710.00
TOTAL FEES					710.00

Please file the application and charge Lucent Technologies, Inc. Deposit Account No. 12-2325 the amount of \$ 710.00 to cover the filing fee for this application. In the event of any non-payment or improper payment of a required fee, the Commissioner is authorized to charge or credit Deposit Account No. 12-2325 as required to correct the error.

Please address all correspondence to Wendy W. Koba, P.O. Box 556, Springtown, PA 18081-0556. Telephone calls should be directed to Wendy W. Koba at 610-346-7112.

Respectfully,

Wendy W. Koba
Wendy W. Koba
Reg. No. 30509
Attorney for Applicant(s)
610-346-7112

Date: 4/4/01

04/04/01

04-05-01

A

PTO/SB/05 (11-00)

Please type a plus sign (+) inside this box ☐

Approved for use through 10/31/2002. OMB 0651-0032

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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UTILITY
PATENT APPLICATION
TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No. 65-104-1-19-28-7-34-13

First Inventor

Capasso

Title

Technique for Measuring Intersubband
Electroluminescence in a Quantum Cascade Laser

Express Mail Label No.

EF172632415 US 2

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

1. ☒ Fee Transmittal Form (e.g., PTO/SB/17)
(Submit an original and a duplicate for fee processing)
2. ☐ Applicant claims small entity status.
See 37 CFR 1.27.
3. ☒ Specification [Total Pages 11]
(preferred arrangement set forth below)
- Descriptive title of the invention
 - Cross Reference to Related Applications
 - Statement Regarding Fed sponsored R & D
 - Reference to sequence listing, a table, or a computer program listing appendix
 - Background of the Invention
 - Brief Summary of the Invention
 - Brief Description of the Drawings (if filed)
 - Detailed Description
 - Claim(s)
 - Abstract of the Disclosure
4. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets 5]
5. Oath or Declaration [Total Pages 11]
- a. ☒ Newly executed (original or copy)
- b. ☐ Copy from a prior application (37 CFR 1.63 (d))
(for continuation/divisional with Box 18 completed)
- i. ☐ **DELETION OF INVENTOR(S)**
Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).
6. ☐ Application Data Sheet. See 37 CFR 1.76

ADDRESS TO:

Assistant Commissioner for Patents
Box Patent Application
Washington, DC 20231

7. ☐ CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix)
8. Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)
- a. ☐ Computer Readable Form (CRF)
- b. Specification Sequence Listing on:
- i. ☐ CD-ROM or CD-R (2 copies); or
- ii. ☐ paper
- c. ☐ Statements verifying identity of above copies

ACCOMPANYING APPLICATION PARTS

9. ☒ Assignment Papers (cover sheet & document(s))
10. ☐ 37 CFR 3.73(b) Statement (when there is an assignee) ☒ Power of Attorney
11. ☐ English Translation Document (if applicable)
12. ☐ Information Disclosure Statement (IDS)/PTO-1449 ☐ Copies of IDS Citations
13. ☐ Preliminary Amendment
14. ☒ Return Receipt Postcard (MPEP 503)
(Should be specifically itemized)
15. ☐ Certified Copy of Priority Document(s)
(if foreign priority is claimed)
16. ☐ Request and Certification under 35 U.S.C. 122 (b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent.
17. ☐ Other: _____

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP)

of prior application No. _____

Prior application information:

Examiner _____

Group Art Unit: _____

For CONTINUATION OR DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

19. CORRESPONDENCE ADDRESS



Customer Number or Bar Code Label

(Insert Customer No. or Attach bar code label here)

or ☐

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Signature

Wendy W. Koba

Date

4/4/01

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FEE TRANSMITTAL for FY 2001

Patent fees are subject to annual revision.

TOTAL AMOUNT OF PAYMENT

(\$ 750.00)

Complete if Known

Application Number

Filing Date

First Named Inventor

Capasso

Examiner Name

Group Art Unit

Attorney Docket No.

65-104-1-19-28-7-34-13

METHOD OF PAYMENT

1. ☒ The Commissioner is hereby authorized to charge indicated fees and credit any overpayments to:

Deposit
Account
Number

Lucent Technologies, Inc.

Deposit
Account
Name

12-2325

- ☐ Charge Any Additional Fee Required
Under 37 CFR 1.16 and 1.17

- ☐ Applicant claims small entity status.
See 37 CFR 1.27

2. ☐ Payment Enclosed:

- ☐ Check ☐ Credit card ☐ Money
Order ☐ Other

FEE CALCULATION

1. BASIC FILING FEE

Large Entity Small Entity

Fee Fee Fee Fee Fee Description

Code (\$) Code (\$) Code (\$) Code (\$) Code (\$)

101 710 201 355 Utility filing fee

106 320 206 160 Design filing fee

107 490 207 245 Plant filing fee

108 710 208 355 Reissue filing fee

114 150 214 75 Provisional filing fee

Fee Paid

710.00

SUBTOTAL (1) (\$)

2. EXTRA CLAIM FEES

Total Claims
Independent
Claims11
2

Extra Claims

-20** =

0

Fee from
below

X

=

0

-3** =

0

X

=

0

Multiple Dependent

=

0

=

0

Large Entity Small Entity

Fee Fee Fee Fee Fee Description

Code (\$) Code (\$) Code (\$) Code (\$) Code (\$)

103 18 203 9 Claims in excess of 20

102 80 202 40 Independent claims in excess of 3

104 270 204 135 Multiple dependent claim, if not paid

109 80 209 40 ** Reissue independent claims
over original patent110 18 210 9 ** Reissue claims in excess of 20
and over original patent

SUBTOTAL (2)

(\$ 0)

**or number previously paid, if greater; For Reissues, see above

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Entity Fee Code	Large Entity Fee Code	Small Entity Fee Code	Small Entity Fee Code
105	130	205	65
127	50	227	25
139	130	139	130
147	2,520	147	2,520
112	920*	112	920*
113	1,840*	113	1,840*
115	110	215	55
116	390	216	195
117	890	217	445
118	1,390	218	695
128	1,890	228	945
119	310	219	155
120	310	220	155
121	270	221	135
138	1,510	138	1,510
140	110	240	55
141	1,240	241	620
142	1,240	242	620
143	440	243	220
144	600	244	300
122	130	122	130
123	50	123	50
126	180	126	180
581	40	581	40
146	710	246	355
149	710	249	355
179	710	279	355
169	900	169	900

Fee Description

Fee Paid

105 130 205 65 Surcharge - late filing fee or oath

127 50 227 25 Surcharge - late provisional filing fee or
cover sheet

139 130 139 130 Non-English specification

147 2,520 147 2,520 For filing a request for *ex parte* reexamination112 920* 112 920* Requesting publication of SIR prior to
Examiner action113 1,840* 113 1,840* Requesting publication of SIR after
Examiner action

115 110 215 55 Extension for reply within first month

116 390 216 195 Extension for reply within second month

117 890 217 445 Extension for reply within third month

118 1,390 218 695 Extension for reply within fourth month

128 1,890 228 945 Extension for reply within fifth month

119 310 219 155 Notice of Appeal

120 310 220 155 Filing a brief in support of an appeal

121 270 221 135 Request for oral hearing

138 1,510 138 1,510 Petition to institute a public use proceeding

140 110 240 55 Petition to revive - unavoidable

141 1,240 241 620 Petition to revive - unintentional

142 1,240 242 620 Utility issue fee (or reissue)

143 440 243 220 Design issue fee

144 600 244 300 Plant issue fee

122 130 122 130 Petitions to the Commissioner

123 50 123 50 Processing fee under 37 CFR 1.17(q)

126 180 126 180 Submission of Information Disclosure Stmt

581 40 581 40 Recording each patent assignment per
property (times number of properties)146 710 246 355 Filing a submission after final rejection
(37 CFR § 1.129(a))149 710 249 355 For each additional invention to be
examined (37 CFR § 1.129(b))

179 710 279 355 Request for Continued Examination (RCE)

169 900 169 900 Request for expedited examination
of a design application

Other fee (specify)

*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$ 40.00)

SUBMITTED BY

Name (Print/Type)

Wendy W. Koba, Esq.

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(Attorney/Agent)

30509

Complete (if applicable)

Telephone

610-346-7112

Signature

Wendy W. Koba

Date

4/4/01

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